**Introduction**

For most radio control cars, we need to use special controllers with limited functions. Why not achieving more useful functions using our phone?

**Problem Description:** Most radio cars need special controller with limited functions

- Normal radio cars can only be controlled using special controller
- Radio cars cannot do self-routing or go with certain patterns
- It is impossible to know the position from the controller side
- Traditional radio controller is power consuming

**Proposed Solution:** Use cell phone to monitor the position and control a car

- Easy-to-use phone app
- Location detection
- Self-routing

**Communication & Sensors**

- Communication between base station and car using XBee
- Communication between phone and car using UART Bluetooth
- Location detect using UART ultrasonic distance sensor and PWM-controlled servo
- Direction detecting using I2C electric compass
- PWM control to achieve smooth turning and speed adjustment

**Conclusion**

With the common bluetooth feature on our phone and several more components, we can achieve a radio car with much better control and more practical functions.